What is claimed is:

1. A process for producing a purine nucleotide which comprises: culturing in a medium a microorganism having the ability to produce a precursor of the purine nucleotide and carrying an introduced DNA which can induce and express an enzyme capable of synthesizing the purine nucleotide from said precursor; allowing said precursor of the purine nucleotide to accumulate in the culture; inducing and expressing the enzyme capable of synthesizing the purine nucleotide from said precursor; allowing the purine nucleotide formed from said precursor to accumulate in said culture; and then recovering said purine nucleotide therefrom.

2. The process according to claim 1, wherein the precursor of the purine nucleotide is 5'-xanthylic acid, the enzyme capable of synthesizing the purine nucleotide from said precursor is 5'-xanthylic acid aminase, and the purine nucleotide is 5'-guanylic acid.

3. The process according to claim 1, wherein the precursor of the purine nucleotide is guanosine, the enzyme capable of synthesizing the purine nucleotide from said precursor is inosine-guanosine kinase or phosphatase, and the purine nucleotide is 5'-guanylic acid.

4. The process according to claim 1, wherein the precursor of the purine nucleotide is inosine, the enzyme capable of synthesizing the purine nucleotide from said precursor is inosine-guanosine kinase or phosphatase, and the purine nucleotide is 5'-inosinic acid.

5. The process according to claim 1, wherein the microorganism belongs to the genus selected from the group consisting of Corynebacterium, Escherichia and Bacillus.

6. The process according to claim 1, wherein the microorganism is Corynebacterium ammoniagenes.

7. The process according to claim 1, which is characterized in that the enzyme capable of synthesizing the purine nucleotide is induced and expressed by the change of condition selected from the group consisting of rise in temperature, rise in pH and rise in osmotic pressure, or by the change of the carbon source from sugars to non-sugars.

8. The process according to claim 7, wherein the non-sugar carbon source is acetic acid or acetate.

9. A DNA which can induce and express an enzyme capable of synthesizing a purine nucleotide from its precursor.

10. The DNA according to claim 9, which can induce and express the enzyme capable of synthesizing the purine nucleotide by the change of condition selected from the group consisting of rise in temperature, rise in pH and rise in osmotic pressure, or by the change of the carbon source from sugars to non-sugars.

11. The DNA according to claim 10, wherein the non-sugar carbon source is acetic acid or acetate.

12. The DNA according to claim 9 or 10, which is pLAC857 or pIGK2.

13. A microorganism having the ability to produce a precursor of a purine nucleotide and carrying an introduced DNA which can induce and express an enzyme capable of synthesizing the purine nucleotide from said precursor.

14. The microorganism according to claim 13, wherein the precursor of the purine nucleotide is 5'-xanthylic acid,

the enzyme capable of synthesizing the purine nucleotide from said precursor is 5'-xanthylic acid aminase, and the purine nucleotide is 5'-guanylic acid.

15. The microorganism according to claim 13, wherein the precursor of the purine nucleotide is guanosine, the enzyme capable of synthesizing the purine nucleotide from said precursor is inosine-guanosine kinase or phosphatase, and the purine nucleotide is 5'-guanylic acid.

16. The microorganism according to claim 13, wherein the precursor of the purine nucleotide is inosine, the enzyme capable of synthesizing the purine nucleotide from said precursor is inosine-guanosine kinase or phosphatase, and the purine nucleotide is 5'-inosinic acid.

17. The microorganism according to claim 13, which belongs to the genus selected from the group consisting of Corynebacterium, Escherichia and Bacillus.

18. The microorganism according to claim 13, which is Corynebacterium ammoniagenes.

19. The microorganism according to claim 18, which is Corynebacterium ammoniagenes ATCC 6872/pLAC857 (FERM BP-6639) or Corynebacterium ammoniagenes ATCC 6872/pIGK2 (FERM BP-6638).